



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/991,953	11/26/2001	Tosiyasu L. Kunii	13826	5231
293	7590	04/19/2007	EXAMINER	
Ralph A. Dowell of DOWELL & DOWELL P.C. 2111 Eisenhower Ave Suite 406 Alexandria, VA 22314			CUFF, MICHAEL A	
			ART UNIT	PAPER NUMBER
			3627	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/19/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/991,953	KUNII, TOSIYASU L.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Michael Cuff	3627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 06 February 2007.

2a) This action is **FINAL**.                  2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 6-17 and 23-25 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 6-17 and 23-25 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All    b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)	5) <input type="checkbox"/> Notice of Informal Patent Application
Paper No(s)/Mail Date _____.	6) <input type="checkbox"/> Other: _____.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-14, 23, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowman et al. (US 6,169,986) in view of Ng.

Bowman et al. shows all of the limitations of the claims except for specifying the use of the search system with a group of stores in an e-mail.

Bowman et al. shows, figure 1, a system and method for refining search queries. In accordance with the invention, the related terms are generated using query term correlation data that is based on historical query submissions to the search engine. The query term correlation data ("correlation data") is preferably based at least upon the frequencies with which specific terms have historically been submitted together within the same query. In accordance with one aspect of the invention, the correlation data is stored in a correlation data structure (table, database, etc.), which is used to look up related terms in response to query submissions. The data structure is preferably generated using an off-line process, which parses a query log file, but could alternatively be generated and updated in real-time as queries are received from users. Thus, for example, in the context of a search engine of an online merchant (e-shop), the search engine tends to suggest related terms that correspond to the current best-selling

products. Notice the Amazon.com book example. The attributes or key words can be author, subject or style.

In a preferred embodiment, each entry in the data structure is in the form of a key term (attribute) and a corresponding related terms list. Each related terms list contains the terms, which have historically appeared together (in the same query) with the respective key term with the highest degree of frequency. The data structure thus provides an efficient mechanism for looking up the related terms for a given query term.

To generate a set of related terms for refining a submitted query (the "present query" or first customer query), the related terms list for each term in the present query is initially obtained from the correlation data structure. The related terms, which remain are terms, which have previously appeared, in at least one successful query submission, in combination with every term of the present query. Thus, assuming items have not been deleted from the database being searched, any of these related terms can be individually added to the present query while guaranteeing that the modified query will not produce a NULL query result. To take advantage of this feature, the related terms are preferably presented to the user via a user interface that requires the user to add no more than one related term per query submission.

One aspect of the invention is thus a method of assisting users in refining search queries. The method is performed by a computer system that implements a search engine that is accessible to a community of users. The method comprises receiving a search query submitted by a user (subsequent search attributes), wherein the search query comprises at least one term. The method further comprises using a history of

Art Unit: 3627

search queries (adding attributes to correspondence table) submitted to the search engine over a selected period of time by the community of users to identify at least one refinement to the search query, and suggesting the at least one refinement to the user.

Another aspect of the invention is a system for assisting users in refining search queries submitted to a search engine. The system comprises a first program module, which processes query logs of the search engine to generate correlation data that reflects frequencies of occurrences of query terms (recording new correspondence relationships) within the same query. The system further comprises a second program module, which uses at least the correlation data to suggest refinements to search queries received from users.

The invention further includes a method of facilitating the refinement of search queries. The method comprises receiving a search query submitted by a user, and identifying a plurality of refined search queries, each of which comprises all terms of the query submitted by the user and an additional term.

Column 11, lines 35-44 show the detection of a purchase of a suggested product.

Ng teaches, figure 1, a system of e-shops sharing resources in an e-mall in order to increase revenue. Bottom of column 1 teaches a product search for a group of stores in an e-mall.

Based on the teaching of Ng, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify Bowman et al. search system

such that it is used for a product search for a group of stores in an e-mall in order to increase revenue.

Claims 15-17, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bowman et al. (US 6,169,986) and Ng I further view of Bauer et al.

The combination system of Bowman et al. and Ng, as discussed above, shows all of the limitations of the claims except for specifying detecting contradicting data, defining false correspondence, and deleting the false correspondence.

Bauer et al. teaches a database synchronizer, which determines conflict detection (column 25, lines 12-13) and runs programs (column 25, lines 39-54), which include defining “false” data and deleting it in order to properly combine two sets of data.

Based on the teaching of Bauer et al., it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to modify the combination system of Bowman et al. and Ng to incorporate the synchronization method of Bauer including conflict detection and defining “false” data and deleting it in order to properly combine two sets of data.

### ***Response to Arguments***

Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cuff whose telephone number is (571) 272-6778. The examiner can normally be reached on 8:00 to 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ryan Zeender can be reached on (571) 272-6790. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

*Michael Cuff* 4/15/07  
Michael Cuff  
April 15, 2007

**MICHAEL CUFF  
PRIMARY EXAMINER**